

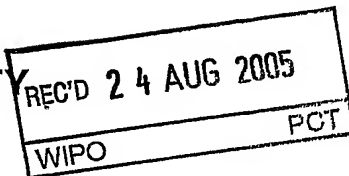
## PATENT COOPERATION TREATY


## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference B02/193-0 WO		<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. PCT/EP2004/052155		International filing date (day/month/year) 13.09.2004		Priority date (day/month/year) 24.09.2003
International Patent Classification (IPC) or national classification and IPC C22C19/05, B23K35/30, B23K1/00				
Applicant ALSTOM TECHNOLOGY LTD et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand  03.03.2005		Date of completion of this report  23.08.2005		
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Brown, A  Telephone No. +49 89 2399-		



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/052155

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements**\* of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-11 as originally filed

**Claims, Numbers**

1-11 as originally filed

**Drawings, Sheets**

1/2-2/2 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-11
	No: Claims	
Inventive step (IS)	Yes: Claims	1-11
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-11
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

## **Part 5**

### **1. The Prior Art**

D1: EP-A-1 258 545 (ALSTOM SWITZERLAND LTD) 20 November 2002 (2002-11-20)

### **2. Priority (Article 8 PCT)**

For a valid claim to priority of a previously filed document, it is required that the subject matter claimed must be explicitly or inherently disclosed in the previously filed priority document (see section 6.09 of the PCT Guidelines). The present application claims a braze alloy that contains 0.17-0.3 Y. The lower level of this Y range is not explicitly given in any of the claimed priority documents and therefore constitutes added subject matter. Accordingly, the claim to the priority of 24.09.2003 relating to the document EP 03103523 is invalid.

### **3. Novelty (Article 33(2) PCT)**

None of the available prior art discloses a braze alloy which has a composition as given in claim 1. Accordingly, the subject matter of claim 1 and its dependent claims 2-11 appear to be novel.

### **4. Inventive Step (Article 33(3) PCT)**

D1, which represents the closest prior art, concerns brazing techniques and materials for brazing of single crystal components and discloses an example alloy composition no. 6 in table 1. The difference between the claimed alloy and that of D1 is that the claimed alloy contains 0.17-0.3 wt.% Y. The effect of adding 0.17-0.3% Y to a braze alloy is that the oxidation resistance of the braze is improved as a result of the formation of Yttrium oxides which form at the grain boundaries and therefore slow the inward diffusion thereby inhibiting the inward growth of the oxide.

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(SEPARATE SHEET)**

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Starting from D1, none of the prior art discloses or hints that oxidation resistance of the braze material could be improve by the addition of 0.17-0.3% Y. Thus, the subject mater of claim 1 and its dependent claims 2-11 would appear to be inventive.